Phoenix Metropolitan Region
Role of Traveler Information in TSMO

District 8 TSMO Sub-Regional Operations Forum

July 20, 2016

MARICOPA ASSOCIATION of GOVERNMENTS

Traveler Information – Phoenix Metropolitan Region

- Role of Traveler Information for DOTs and Transportation Management Agencies (TMAs)
- How Traveler Information has evolved over the last 20 years
- Core components and relationship to other operations areas
- Key trends influencing Traveler Information

Role of Traveler Information: Arizona DOT and MAG

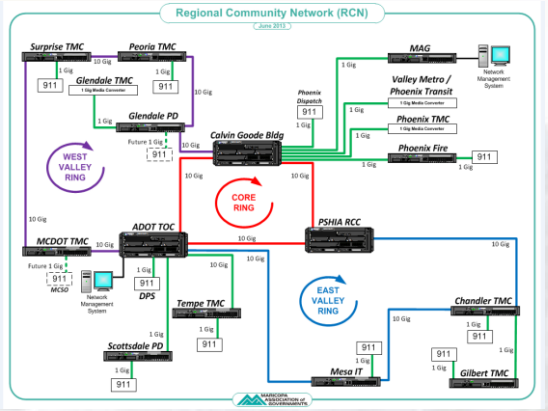
- MAG (a TMA and an MPO) is responsible for transportation planning for Phoenix metro region
  - 4.5 million people, 29 local agencies and 3 tribal communities
- Value of Traveler Information recognized very early in ITS planning
- Early implementation of RDS-TMC broadcasts
- Close coordination with ADOT in developing infrastructure
  - Freeway Management System - $145m
  - Arterial ITS - $7m/yr

Freeway Service Patrol

Freeway Dynamic Message Signs

Role of Traveler Information: Arizona DOT and MAG

- MAG ICM
  - Loop 101, I-10, US 60
- Regional Communications Network (RCN)
- Traveler Information for Special Events
  - Super Bowl, MNF, TPC, PIR, others
- Non-recurring events
  - Freeway Crashes & Alerts
  - Amber, Blue, Silver Alerts



ARIZONA AMBER ALERT

AZ511.gov 511
Arizona Traveler Information

Infrastructure for Traveler Information

- Public Sector Infrastructure
  - Dynamic Message Signs (DMS) on Freeways – displays alerts and travel times
  - DMS on a few arterials
  - 511 phone system
  - AZ511.gov website – including mobile portal
- Private Sector Service Providers
  - INRIX & Others

The Evolution of Regional Traveler Information

- 1990's - Phoenix demonstrated real-time broadcasting of traffic conditions to in-vehicle receivers
- Kiosks: Monitors and LCD displays for traveler information
- Advent of cell phones, internet access and smart phone apps eliminated kiosk based approach
- Expansion of coverage and ADOT FMS
  - 225 CCTV, 124 DMS, expanded TOC hours of operation
  - FMS expansion → real time corridor travel times (detector data), two panel messaging, two destination displays
  - CCTV multicast to local agencies and news agencies
  - Road conditions via Twitter through ADOT Communications

Traveler Information: Core Components

- Identifying/Understanding the user, their needs, their context
  - Pre-trip, En route, and last mile needs
- Provide real-time, accurate, relevant information
- Get from A to B within the context of the user – i.e. Rural vs. Urban
  - MAG region mostly urban →more mode choices, include last mile context, for example
- Monitoring and adapting to the evolution of devices/applications used by core demographic
  - More types and more data sources to be integrated into traveler information system

Traveler Information Influences – Key ~~Trends~~ Questions

- Key questions for public sector agencies:
  - Who is the future traveler? What info do they need? Delivered how?
  - How should we build and operate Next Generation Traveler Information Systems (NGTIS)?
  - How could they be funded? Feasible business models?
- How to influence travelers to act so that network efficiency is optimized via TSM&O?
- How could we capitalize on:
  - Evolution of telecommunications – i.e. 5G and beyond
  - Emerging solutions for in-vehicle delivery of traveler information
- Predictive analytics – simulation modeling -- staffing, education and resources
- Planning for and managing increase in data and data sources
- Keeping up with new technology

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